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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,758	12/12/2003	Taro Ishikawa	010755.52992US	8747

23911 7590 07/13/2007
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EXAMINER

KAO, JUTAI

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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07/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/733,758	ISHIKAWA ET AL.	
	Examiner	Art Unit	
	Ju-Tai Kao	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>05/05/2006, 05/18/2004</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

1. Figure 6 and 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 8c and 9a-g. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1-4 and 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Hernandez-Valencia (US 6,266,327).

Hernandez-Valencia discloses a non-conformance indicator for the guaranteed frame rate service including the following features.

Regarding claim 1, an automatic detecting method for a protocol nonconformity (see “a conformance algorithm...evaluates, in real time...” recited in column 1, line 56-67) in a transmitting and receiving control process (see “evaluates...a received data stream from a user against the user’s predefined traffic set” recited in column 1, line 67 to column 2, line 2; that is, the evaluation step being the control process) occurring in the communications (see “received data stream” recited in column 2, line 1; receiving a stream being a communication) between transmitting (see “from other users” recited in column 4, line 53) and receiving terminals (see “received by ATM switch 105” recited in column 4, line 53) that make at least one transmitting and receiving control process (see “sets the PTI field” disclosed in the abstract) in accordance with a predetermined communication protocol (see “Guaranteed Frame Rate service (GFR)” recited in column

1, line 22), said method comprising: a calculation step of calculating the state information regarding a transmitting and receiving state of a packet (see “the conformance algorithm measures the above described...values” recited in column 2, line 8-9, wherein these values represents states of the received packet stream) to correspond to a result of transmitting and receiving control (the result of receiving the packets) in accordance with said communication protocol (see “As part of providing the GFR service, a conformance algorithm is used...” recited in column 1, line 56-58; GFR being the communication protocol and the conformance algorithm being the transmitting and receiving control) by acquiring the packet transmitted or received (see “received data stream” recited in column 2, line 1) in the communications between said transmitting and receiving terminals (explained above); and a comparison step (see “a comparison is made” recited in column 6, line 23) of comparing the state information calculated at said calculation step (explained above, also see “Cnt variable” recited in column 6, line 23) and the nonconformity information (see “traffic set...peak cell rate...maximum frame size (MFS)...” recited in column 1, line 60-67) featuring nonconformity (see “greater than the MFS” recited in column 6, line 24) in said at least one transmitting and receiving control process (explained above); wherein the transmitting and receiving control process (explained above) where said nonconformity occurs is detected (see “the frame is marked as a non-conforming frame” recited in column 6, line 26) based on a comparison result at said comparison step (see “If the value of the Cnt variable is greater than the MFS...” recited in column 6, line 24-25).

Regarding claim 2, an estimation step of specifying the transmitting and receiving control process to be made based on the packet transmitted or received at said transmitting and receiving terminal (see “a comparison is made...the value of the Cnt variable is greater than the MFS...” recited in column 6, line 23-24; the comparison being the control process) in accordance with said communication protocol (see “As part of providing the GFR service, a conformance algorithm is used...” recited in column 1, line 56-67; the GFR being the communication protocol), and estimating the normal information corresponding to a processing result that said specified transmitting and receiving control process is normally performed (see “maximum frame size (MFS)” recited in column 1, line 65-66; that is, frames transmitted in the GFR service would have a maximum frame size of the MFS), wherein said nonconformity information defines a relation between the state information calculated at said calculation step when there is said nonconformity and said normal information (see “If the value of the Cnt variable is greater than the MFS...” recited in column 6, line 24-29; nonconformity being the relation where Cnt is greater than the normal MFS).

Regarding claim 3, wherein said nonconformity information defines a relation (explained in the rejection to claim 1 and 2, see “If the value of the Cnt variable is greater than the MFS...” recited in column 6, line 24-29; nonconformity relation being that the measured Cnt being greater than the normal MFS) between said state information (explained in the rejection to claim 1, “measures...values” recited in column 2, line 8-9; the measured values being the state information) and a fixed value (see “permitted MFS value of the traffic set is equal to 6” recited in column 2, line 10-11)

confirmed in advance (see “predefined traffic set” recited in column 2, line 2) for the nonconformity in said transmitting and receiving control process (the conformance algorithm explained in the rejection made to claim 1 and 2).

Regarding claim 4, wherein said calculation step further comprises updating said state information every time acquiring the packet (see “a new cell from the received data stream arrives...” recited in column 6 line 11-29 and Fig. 3-8; where each of the conformance check algorithm flowcharts in Fig. 3-8 shows a series of checks performed on each new cell received and updating values, such as Cnt in step 325, 425, etc.), and said comparison step further comprises comparing the latest state information updated at said calculation step and said nonconformity information (see Fig. 3, step 330, checking the calculated Cnt against the MFS).

Regarding claim 6, an automatic detecting apparatus (see ATM switch 105 in Fig. 2) for a protocol nonconformity (see “a conformance algorithm...evaluates, in real time...” recited in column 1, line 56-67) in a transmitting and receiving control process (see “evaluates...a received data stream from a user against the user's predefined traffic set” recited in column 1, line 67 to column 2, line 2; that is, the evaluation step being the control process) occurring in the communications (see “received data stream” recited in column 2, line 1; receiving a stream being a communication) between transmitting (see “from other users” recited in column 4, line 53) and receiving terminals (see “received by ATM switch 105” recited in column 4, line 53) that make at least one transmitting and receiving control process (see “sets the PTI field” disclosed in the abstract) in accordance with a predetermined communication protocol (see “Guaranteed

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Frame Rate service (GFR)" recited in column 1, line 22), said apparatus comprising: packet acquiring means (see "ATM switch" recited in column 4, line 45) for acquiring a packet to be transmitted or received in the communications between said transmitting and receiving terminals (see "ATM switch 105, receives a user data stream...is a gateway element for transmission..." recited in column 4, line 45-55); calculation means (see "ATM switch 105 evaluates user data stream 101 for conformance..." recited in column 5, line 1-3) for calculating the state information regarding a transmitting and receiving state of said packet (see "the conformance algorithm measures the above described...values" recited in column 2, line 8-9, wherein these values represents states of the received packet stream) to correspond to a result of transmitting and receiving control (the result of receiving the packets) in accordance with said communication protocol (see "As part of providing the GFR service, a conformance algorithm is used..." recited in column 1, line 56-58; GFR being the communication protocol and the conformance algorithm being the transmitting and receiving control) based on said packet acquired by said packet acquiring means (see "evaluates user data stream...to the user's traffic set..." recited in column 5, line 1-4); comparison means (see "ATM...evaluates user data stream...to the user's traffic set..." recited in column 5, line 1-4) for comparing the comparing the state information calculated by said calculation means (explained above, also see "Cnt variable" recited in column 6, line 23) and the nonconformity information (see "traffic set...peak cell rate...maximum frame size (MFS)..." recited in column 1, line 60-67) featuring nonconformity (see "greater than the MFS" recited in column 6, line 24) in said at least one transmitting and receiving control

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process (explained above), said nonconformity information being accumulated in advance (see "predefined traffic set" recited in column 2, line 2); wherein the transmitting and receiving control process (explained above) where said nonconformity occurs is detected (see "the frame is marked as a non-conforming frame" recited in column 6, line 26) based on a comparison result from said comparison means (see "If the value of the Cnt variable is greater than the MFS..." recited in column 6, line 24-25).

Regarding claim 7, estimation means for specifying a transmitting and receiving control process to be made for the packet acquired at said transmitting and receiving terminal (see "a comparison is made...the value of the Cnt variable is greater than the MFS..." recited in column 6, line 23-24; the comparison being the control process) in accordance with said communication protocol (see "As part of providing the GFR service, a conformance algorithm is used..." recited in column 1, line 56-67; the GFR being the communication protocol) based on said packet acquired by said packet acquiring means, and estimating the normal information corresponding to a processing result that said designated transmitting and receiving control process is normally performed (see "maximum frame size (MFS)" recited in column 1, line 65-66; that is, frames transmitted in the GFR service would have a maximum frame size of the MFS), wherein said nonconformity information defines a relation between the state information calculated by said calculation means when there is said nonconformity and said normal information (see "If the value of the Cnt variable is greater than the MFS..." recited in column 6, line 24-29; nonconformity being the relation where Cnt is greater than the normal MFS).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hernandez-Valencia (US 6,266,327) in view of Aoki (US 6,757,255).

Hernandez-Valencia discloses the claimed limitation. Hernandez-Valencia does not disclose the following features: regarding claim 5, wherein said state information includes a total number of transmitting and receiving packets, the maximum value or

minimum value of packet size, and the round trip time up to receiving a response packet to the transmitted packet.

Aoki discloses an apparatus for and method of measuring communication performance including the following features.

Regarding claim 5, wherein said state information (explained in the rejection made to claim 1) includes a total number of transmitting and receiving packets (see "total number of packets" recited in claim 6), the maximum value or minimum value of packet size (see "maximum value...of the packet size" recited in column 11, line 41-42), and the round trip time (see "round trip time" recited in column 7, line 26) up to receiving a response packet (see "an ACK packet receiving time" recited in column 3, line 32) to the transmitted packet (see SYN packet transmitting time" recited in column 3, line 31-32) .

It would have been obvious for one of the ordinary skill in the art at the time of the invention to modify the system of Hernandez-Valencia by using the features, as taught by Aoki, in order to better detect nonconformance of data transmission

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hernandez-Valencia (US 6,266,327) in view of Foster (US 2002/0159389).

Hernandez-Valencia discloses the claimed limitation. Hernandez-Valencia does not disclose the following features: regarding claim 8, packet filter means for selecting only a required packet based on the header information of packet acquired by said packet acquiring means and transferring it to said calculation means.

Foster discloses a method and system for connection preemption in a communications network including the following features.

Regarding claim 8, packet filter means (see “filtering is performed at the ports...” recited in page 5, paragraph 41) for selecting only a required packet based on the header information of packet (see “filter communication based on...header...” recited in page 5, paragraph 41) acquired by said packet acquiring means (see “When the port receives communication, it determines whether any of the filter parameters are...” recited in page 5, paragraph 41) and transferring it to said calculation means (disclosed in Hernandez-Valencia in the rejection to claim 6 and 7).

It would have been obvious for one of the ordinary skill in the art at the time of the invention to modify the system of Hernandez-Valencia by using the features, as taught by Foster, in order to preserve processing resources on packets that do not need to be processed.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Musial (US 6,345,042) discloses a method for checking a data exchange based on a communication protocol.

Bottiglieri (US 6,466,542) discloses a multiple phase time counter for use in a usage parameter control device for an asynchronous transfer mode system.

Maher, III (US 7,058,974) discloses a method and apparatus for preventing denial of service attack.

Aznar (US 6,754,182) discloses a method and apparatus for policing cell-based traffic.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ju-Tai Kao whose telephone number is (571)272-9719. The examiner can normally be reached on Monday ~Friday 7:30 AM ~5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571)272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ju-Tai Kao



KWANG BIN YAO
SUPERVISORY PATENT EXAMINER

